

OIPE

RAW SEQUENCE LISTING  
PATENT APPLICATION: US/09/826,206

DATE: 04/20/2001  
TIME: 11:39:41

Input Set : A:\seqlist 1533 1100001.txt  
Output Set: N:\CRF3\04202001\I826206.raw

#2  
ENTERED

5 <110> APPLICANT: D'Elia, John  
9 <120> TITLE OF INVENTION: Ketogulonigenium Shuttle Vectors  
13 <130> FILE REFERENCE: 1533.1100001  
C--> 17 <140> CURRENT APPLICATION NUMBER: US/09/826,206  
C--> 17 <141> CURRENT FILING DATE: 2001-04-05  
17 <150> PRIOR APPLICATION NUMBER: US 60/194,625  
19 <151> PRIOR FILING DATE: 2000-04-05  
23 <160> NUMBER OF SEQ ID NOS: 4  
27 <170> SOFTWARE: PatentIn version 3.0  
31 <210> SEQ ID NO: 1  
33 <211> LENGTH: 2112  
35 <212> TYPE: DNA  
37 <213> ORGANISM: Artificial Sequence  
41 <220> FEATURE:  
43 <221> NAME/KEY: misc\_feature  
45 <223> OTHER INFORMATION: replicon from pADM291  
49 <400> SEQUENCE: 1  
50 ggcaatgggt cgaaattcat agaattttgt gtgaggtgcg tagcggctct gacaggggtg 60  
52 ctgcgcggag atctctgggtc tcaggtaggg cgacaatgga gaggtgttag ttgccccctg 120  
54 tatcgtctctc tgcgtggcgc attgggtcat cctgcccga catatgat tccgctagag 180  
56 gattactgat agtttctgcc tgcgggctt gtcgggcttg tcgggcttgc cgggcttgtc 240  
58 gggcctgtcc ctctgtccc gctgtcttc actttttcac aatcaaaaaa tgggcgaagc 300  
60 ccttcttgtt ctatagttct tatagttcat acgaaaatta cacataatta tcaatagctt 360  
62 attcgcttaa aaggagtaa ttgggccgca aaaggagta attgggccgc aaaaggaggt 420  
64 aattggggcg caaaaggag taattgggcc gatatcgtt gtttacatgg ggaggaatcc 480  
66 ccttaatcat ttctccccat gggaaagaca acacaagtgg ccgcagaccg ggccttcgac 540  
68 cagacaaaaa ctgtgtctcc tgcgaggtg gcgagagg tctatatgcg caatccgccc 600  
70 cgctgcagg cgctcaagct catgcattta atgatagcca ctgcgggcgg ccgcatggct 660  
72 gatgatgtgc gccatgaaat gcggtggcc gacattcgcg caatcgacgg catgaaaaac 720  
74 catgaccgtg agagcctgac ccgctgttc gaggagctag ccgctgcgtt gttgacctat 780  
76 gatgacctg caaagatgat cgtgacagtc ggcggcttgg tcgataggc gcgaatagac 840  
78 taccgccagg aggcaagcgg cgaactccta gtgacgtgga ccttcggag tacattccgt 900  
80 cgtatggcgg cggagtga caactgggcc attctcgacc gtcaaacggt attccatctc 960  
82 ggtagtaagt attcgtgct gctgttccag cagctctcta gtctcgcaa tcttgatcgg 1020  
84 atgagcgca aaacctttac ggtccccgag ttgcgggcgc tcttgagggt gcccgaggga 1080  
86 aagatgggtc gttggaacga cgttaacaga ttgtctctca aacctgcaat ggatgagatc 1140  
88 aaccatttat cgcgtctgac attgacggca aagccgacca agattggccg tagcgtggca 1200  
90 agtgtgacta taggctggga agtgaaagac gacccaaccg tcgccaggcg cgagctggcg 1260  
92 ggttccaagg tcggtcgaga tgcctcgtgc agaggggcag cggaaacgat agccccctcc 1320  
94 ttcccagaag cgggcgggat cacctacagt ccagtttggc tggagctgaa acgctctgct 1380  
96 ggcagcaaca aggacaacga tctgatcgcc tcagacttcc ggcgtttctg tcgggagaga 1440  
98 ggcgtgcgtc tggacgctgc aaacatcgaa aaactgtttt tagatttctg cgcaaaggta 1500  
100 gggagggttt gagttttgag gtatttcacc gcaatagtgt taaatgactt tcgtgaaacg 1560  
102 atgtgcaata tagcggtaag actatgaaat acacggctgg acaggctgca aaagcaacgg 1620  
104 gtgtggcgac cgcaaccatc actcgggcgc taaaaagcgg taaaatttcc ggtaaaaaag 1680  
106 atgaatctgg ggcattgggt atagatcctg cagaattgca cagagtgttt cctccattt 1740  
108 caaagaaata caccgaaaca cctaacacgc aagtatatgg taagcgtgat gaaacacatg 1800

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/826,206

DATE: 04/20/2001

TIME: 11:39:41

Input Set : A:\seqlist 1533 1100001.txt

Output Set: N:\CRF3\04202001\I826206.raw

```

110 aaatgacctc agaaatcagc gcattagagc gtgaagttcg gactttacgc gatgctttat 1860
112 ctgatgccag ggaggatcgc gacaaatggc gcgacatggc cgagcgtctt tcaatttcat 1920
114 caccgatgag agaggaagac cgccccctc aaaaacaaag atggtggaag atattctgat 1980
116 cctgggcttc aggagccttg cctttactgg cgaaaaacg cgatattgag gcacaggccc 2040
118 gcactttaga ggcggaagcc tataacgagt accaaaacac tagaagccag attgaggaaa 2100
120 atagggaacg tg                                     2112
123 <210> SEQ ID NO: 2
125 <211> LENGTH: 8509
127 <212> TYPE: DNA
129 <213> ORGANISM: Artificial Sequence
133 <220> FEATURE:
135 <221> NAME/KEY: misc_feature
137 <223> OTHER INFORMATION: pADM291
141 <400> SEQUENCE: 2
142 tgggtgaacgc attggttga tgtttgagaa aagcgaaaag acccggccac agttgtgggt 60
144 agagcgtcga tatgtgcaag acctgatgct tgctgacatc gaactccgtg tctacctcgc 120
146 atcgctcgctg tatcagcctg ctgcggatgg cggaagcccc gcctatggtc gtcacgcagc 180
148 ccttaaggcg atgcgcgact tggcccatgc cgatctgggt cgtttcacca tcggccggat 240
150 tacgcaactg gagatgatcc tagagcgggt aaccgagaca tctggttaac gccataaagg 300
152 ctgcggcatg aaaataggcg gacaatctgc gcttggccgc ccccgttctc agccgtgctt 360
154 gctctctgcc tgcattggcag gacgcaggat cgcgttcata cgggtctgat atccagaccc 420
156 gcccgccctg agccatgccg gcacatcggc atcaagccgc gcggtgatct gctgcttgat 480
158 cgggcgatag aagcgcccac gctcggcgct tgccccattg gcttcggtoa gtcggggaac 540
160 atcgttgggt tcgatctgct cggggcgccag agcgtccagc cgcgccaat tcttgccggc 600
162 ctccctcggtg atgcccggga cgtatcgaa ggtgtattca accattggca tatctcttcc 660
164 tttctcgcg ttagcgcgcy cgagccgaaa tgatcggtat cgtctcgacc ggatcggggc 720
166 cagcctcgat gatcagggtg gcaaccagaa ggacggcagc gccatagatc tgcccaacgg 780
168 tttgccagcg gtattcccc cctcgcgatc tatcctgaac cgtcagggtc aacggatcgg 840
170 cgaacacatg cacagcatcc tcgaaccgga tgccatgctt cttttcgttc gtttcgcct 900
172 tggcgggatc ccagataaac cgcattcttca tggcagaatt ataactacac atttgtagtt 960
174 attcaatggc aagtcgcagg ttcaaatac gccccaaac cgcaactgta ttcgtttctac 1020
176 tcacgcgcgc ttttgaatag aagcttgcat gataacaccc gccgcgtcct caacaaaata 1080
178 aggcaaatcc gccgcgctgg cgcaatctgc gctttgtcga tgcaaggctt tgtggtttca 1140
180 tactgcaaga gcatgcaagg aattgccccg gatgagcacc acgacgacac ccaccaagcc 1200
182 ggcttggaac aagggccgcg ttgtcgggaa aaagccgcg ctgacacctg accagattgc 1260
184 cctgatccgt ctcacctcgc gccaggaacg ggcgtggcgg gatctggctc tgttcaacgt 1320
186 ggcgatcgac accagtttgc gcggctcgga cctcgtgcgc ctgcgcgtct cggatgtggc 1380
188 gacccagctt ggtctgcgtg agatcgtcga gatccgccag aagaagaccg aggcccgcaa 1440
190 tgtccgcccc gtacaggccc gctgtcggg ggggacacgc gagagcctgc ggtctctatc 1500
192 cgcggcctct gacaagccgc tgcacagctg gctgttcacc ggacagggca tccgctggtc 1560
194 ccacacccac cttagcgaga gccagctgtg gcgcctgttc aagtccctggc tcgagaaggc 1620
196 gcggctcgat cccagcctct acgggctgca ctgcgtgcgc cgaaccttcc ccagccacat 1680
198 ctaccgcgag accggcaatc tgccgcgccg acagctgctg ctgggccatg ccagcatcga 1740
200 gagcaccaag gactacatcg gcaccgagca agccgaggcc ctgatatcg cacggaggta 1800
202 tcacctctaa cccatggaga cctatctcga gaagcgcatc cccgccaaaga acacagcacg 1860
204 gttctaccgc atggcggtcc tgccgaacct gttcggggaa tggacgctgt atcgagaatg 1920
206 gggcgcgcat ggcacagcg ccgcgcatcc gctcgattgg tttgagatg aacaagatgc 1980
208 catcgctgcg atgctcgcca tcgagaccgc caagcgtcag cgcgggtatt ggctcgagcc 2040
210 catccagatt gacatgttcc caggggcata acaggccatc aatgtaagag tgcaagcgga 2100

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/826,206

DATE: 04/20/2001

TIME: 11:39:41

Input Set : A:\seqlist 1533 1100001.txt

Output Set: N:\CRF3\04202001\I826206.raw

212	gcaagcaaaa	gccatttcac	agtgagggtg	cagatgttcc	tgtttcacag	tgaaagcgct	2160
214	gatgctgttt	ccacgccaca	gactgatacg	accaaagcaa	cggggtctgc	cgccacagac	2220
216	cgggtcgccg	gccacccgca	gaaacgcagg	taaaaatggcg	atttccgcaa	aaaaaccgtg	2280
218	caaatgatgg	caaatcacca	tccagtttca	tccatgaaacc	cgctcgctcaa	catgaacgag	2340
220	caggccatca	tccaagcccc	agaaacgcgg	tgccgcgact	acagatgagc	gatgttcttg	2400
222	ctcataggct	gcaaggccct	gcaacagtga	tttcaccgtg	agattgcagg	gtcttttggc	2460
224	tctcccga	gagccacctc	agggtgagcg	agctagccgt	ctaggttcac	agtgaatcg	2520
226	ctgaggagcg	ttgcccgggt	tatggtttgg	ctggtcacgt	tgcccatcgg	aatggagcat	2580
228	acgatggcct	ctacgcagtc	gaatcctgag	gcttcacgtg	ggaaaaatac	gctccaaaaa	2640
230	agccctgacc	aaatcttggg	aaaattgctt	gaaaagtgtg	cttctaaaaa	actgggaacg	2700
232	agatatgcac	gagatccctt	acgagtgcgt	taggagtaat	gcagtggaac	aaaacgccat	2760
234	tttttgcctc	agtaggagta	atggagtggg	tatttttttg	gagattttgc	ttcagtagga	2820
236	gtaacgcgtt	gggttaaat	gcttgattgg	cggttcaaat	cgaccaccga	gctgcccgtt	2880
238	gtcgtattcg	atctgccccg	caattgggca	cttgccagcc	atccccctga	acttctggcg	2940
240	atgaccattt	cgaaggcaat	gggtcgaaat	tcatagaatt	ttgtgtgagg	tgcgtagcgg	3000
242	ctctgacagg	gggtgctgcg	ggagatctct	gggtctcagg	agggcgacaa	tgagagaggt	3060
244	ttagttgccc	cctgtatcgc	tctctgcgtg	gcgcattggg	tcctcctgcc	cggacatatg	3120
246	atattccgct	agaggattac	tgatagtttc	tgccctgcgg	gcttgcggg	cttgcggggc	3180
248	ttgtcgggct	gttcgggctt	gtccctcttg	tcccgccgtg	cctcactttt	tcacaatcaa	3240
250	aaaatgggcg	aagcccttct	tgttctatag	ttcttatagt	tcatacgaaa	attacacata	3300
252	attatcaata	gcttattcgc	ttaaaaggga	gtaattgggc	cgcaaaaagg	agtaattggg	3360
254	ccgcaaaaag	gagtaattgg	gccgcaaaa	ggagtaattg	ggccgataac	ggttggttac	3420
256	atggggagga	atccccctaa	tcatttctcc	ccatgggaaa	gacaacacaa	gtggccgcag	3480
258	accgggctct	cgaccagaca	aaaactgtgc	tccctgccga	gggtggcgaga	gggtctata	3540
260	tgccgaatcc	gccccgcctg	caggcgctca	agctcatgca	tttaatgata	gccactgcgg	3600
262	gcggccgcat	ggctgatgat	gtgcgccatg	aaatgcggct	ggccgacatt	cgcgcaatcg	3660
264	acggcatgaa	aaaccatgac	cgtgagagcc	tgaccccgct	gttcgaggag	ctagccgctg	3720
266	cgggtgtgac	ccatgatgac	cctgcaaaag	tgatcgtgac	agtcggcggc	ttggtcgatg	3780
268	aggcgcgaa	agactaccgc	caggaggcaa	gcggcgaaat	cctagtgcag	tggaaccttc	3840
270	ggagtacatt	ccgtcgtatg	gcggcgaggt	cgaaccactg	ggccattctc	gaccgtcaaa	3900
272	cggatttcca	tctcggtagt	aagtattccg	tgctgctggt	ccagcacgtc	ttagtctctg	3960
274	ccaatcttga	tcggatgagc	gcgaaaacct	ttacggctcc	cgagttgcgg	gcgctccttg	4020
276	gagtgcgccg	gggaaagatg	gttcgttgga	acgacgttaa	cagatttgct	ctcaaacctg	4080
278	cactggatga	gatcaacctt	ttatcgctgc	tgacattgac	ggcaaagccg	accaagattg	4140
280	gccgtagcgt	ggcaagtgtg	actataggct	gggaagtga	agacgaccca	accgtcgcca	4200
282	ggcgcgagct	ggcggtgttc	aaggctcggtc	gagatgctcg	tcgcagaggg	gcagcgga	4260
284	cgatagcccc	ctccttccca	gaagcgggcg	ggatcaccta	cagtcacagt	tggttgagc	4320
286	tgaaacgctc	tgctggcagc	aacaaggaca	acgatctgat	cgctcagac	ttccggcgct	4380
288	tctgtcggga	gagaggcgtg	cgtctggagc	ctgcaaacat	cgaaaaactg	tttttagatt	4440
290	tctgcgcaaa	ggtagggaa	gtttgagttt	tgaggtattt	caccgcaata	gtgttaaatg	4500
292	actttcgtga	aacgatgtgc	aatatagcgg	taagactatg	aaatacacgg	ctggacaggc	4560
294	tgcaaaagca	acgggtgtgg	cgaccgcaac	catcactcgg	gcgctaaaaa	gcggtaaaat	4620
296	ttccggtaaa	aaagatgaat	ctggggcatg	ggttatagat	cctgcagaat	tgacacagat	4680
298	gtttcctccc	atttcaaaga	aatacaccga	aacacctaac	acgcaagtat	atggttaagc	4740
300	tgatgaaaca	catgaaatga	cctcagaaat	cagcgcatga	gagcgtgaag	ttcggaactt	4800
302	acgcgatgct	ttatctgatg	ccaggagga	tcgcgacaaa	tgccgcgaca	tgcccgagcg	4860
304	tctttcaatt	tcataccgga	tgagagagga	agaccgcccc	cctcaaaaac	aaagatgggt	4920
306	gaagatatct	tgatcctggg	cttcaggagc	cttgcccttta	aaacctgaat	cagcattcta	4980
308	gcgatgctga	taagaagtaa	atatagccac	aataagagcg	ccattttcca	ttcacatata	5040

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/826,206

DATE: 04/20/2001

TIME: 11:39:41

Input Set : A:\seqlist 1533 1100001.txt

Output Set: N:\CRF3\04202001\I826206.raw

310	gctcatcatg	tgatcaatat	caagtattga	tattcatcaa	tggagaagaa	tttacctgta	5100
312	tcacaggatc	atcacagcat	ttgtttttgt	atttctaagt	gctaacataa	ctatcgctgg	5160
314	ccctaaagaa	gattgtacta	ttgcagtatc	tcaccttggg	tttcagaccg	ataattacag	5220
316	ctttgtcgaa	gccggttttt	ttgccagaga	gagacacgtt	tttgatgggtg	taataaactg	5280
318	ctacgtatct	catgatggta	acatacacag	catcatccgg	ggcaacacac	ctcttatgga	5340
320	agatggatat	tatggcccag	aagtactggc	ggaaaaacgc	gatattgagg	cacaggcccg	5400
322	cacttttagag	gcggaagcct	ataacgagta	ccaaaacact	agaagccaga	ttgaggaaaa	5460
324	tagggaacgt	gccctcgagg	cgctgcggct	agctagcagt	ccttttatta	ataatggtag	5520
326	tacagaagaa	cagacaatta	tacaggccgc	aactccgacg	gcagatcctg	ttgtatctgt	5580
328	acccgtggca	tctccagaat	ctaaacaaag	tgcgagccg	gaaccggctg	ctgttccagc	5640
330	atcagtttct	gttagagaga	tgtggagcac	ggctgacaga	ttgaccaccc	gtacatgccc	5700
332	atcgactcga	tcgaggagca	ctagctgggt	aacagatgga	actaaagtaa	cagtttatga	5760
334	agaaaaagac	ggttggtcta	gaatcggaga	gctacagtct	gcaatgtgca	taaatggaat	5820
336	aagtggcgcg	gtcgattcag	gtgaatcttc	ctgcaatccc	accaatggta	tcgttaatgg	5880
338	gcaattcgca	ccctgggttt	tctcggatta	tcttacgata	caagagccag	aagctcccat	5940
340	atccacccaa	gagtgtcgaa	atatggggct	cgagaactca	gataattacc	gtatctatcc	6000
342	tagtcagttc	tcgactgccg	ctctcgaaat	gatcaacgat	agagtatgca	atacatctga	6060
344	tttcagagat	ttagcttggt	tatcttctcc	tgaagagga	caggattact	acttcacctc	6120
346	ttgtggcgga	tttcaacctc	aaaacagatg	gtatttgaat	gtcaggacag	gtgaaatcac	6180
348	ccgtgatata	tccaccaagg	tgagtccctg	agatcagact	ctcaaggagt	aaacgtttta	6240
350	atccatctcc	atgagatcaa	catagatagg	tgttcagttc	cggtatctgg	tggatcggtg	6300
352	ttaggatgaa	tctgtccggc	tcttgacata	ccccgcgctg	aaaccctgtc	tttacaagag	6360
354	aaagtcagcg	gcctcgaaag	cgctctagcc	gatgcccggg	cccaacggga	tgagtagagc	6420
356	gaacaagcaa	agcgcctagc	tatggctctg	cccgtcccgg	aagctgcagc	cgagaatcc	6480
358	ggaaaaaaga	aaaaatatcat	ggcagcgatt	atttggatag	gacacaatcc	ttttctatta	6540
360	atatacaaca	agatatgggc	atgcgcgcgc	cgtagctctc	attcgataca	atccaaatcc	6600
362	tgaagctga	ctatgcctta	cgcatcgccg	accatcggtg	ccgtcattga	tgacgtgaac	6660
364	cgcacctacc	tgtgcgccgc	aatccaacgc	ccctatgtct	ggtctgcggg	acaggctcgt	6720
366	gcgtgttcg	actctctggt	gaagggctat	ccgatcagca	gcttcatggt	ctgggcgggtg	6780
368	gacgaggaga	ccaaggcaga	gctgcgatgc	tacaaattca	tcgagaatta	tcggcccga	6840
370	atgatgaacg	agccgactag	tcgggacggg	cggcaggtcg	tccttgtgct	cgacggacag	6900
372	cagcggtatga	cctcactggt	gatcggtctg	cgcgccacat	tctctgagaa	agccaaacac	6960
374	gcgcgcaaca	gcaacgcggc	ggcgtggctg	gcaaaaacgc	tatatctaga	cctgcttcgg	7020
376	gacccggatc	cgaagaactc	cgatgaagac	gaaggcaatg	agttcggaat	cacttacggt	7080
378	ctctctttcc	atgaacgcgc	cccgaaccag	agccacaggc	accactgggt	caaggtggga	7140
380	tcgatactgg	attatcctac	agacgagcag	ctggaggggt	tgattgccaa	ggtgaagacc	7200
382	gaattttcat	atggtgtatc	ggattgggaa	aaggggctgg	cggaagacac	cctgcgcggg	7260
384	ttgcaccgcg	tcactctgaa	agacgagggc	atcaactttt	tcactgaacg	cgaccagtcg	7320
386	gttgatcggg	tgtcggacat	cttcgtgcgg	gccaatgacg	ggggcacgaa	actgtcgaag	7380
388	gcagacctgc	tgatgtcgat	gatcacgtca	aaatgggtcca	gcggatcggc	ccgcgaggaa	7440
390	atcgccggct	ttgtcgagca	cataaaca	ggtctcggtg	cgccgaacaa	gatcagtcgc	7500
392	gatctggtcc	tgaaggcctg	tctggtcgtc	tcgattatg	atgtcgtcta	taatgtcagg	7560
394	aaactttcaa	gcgaggtcat	cggcaggatc	gaaagcaact	gggatcgat	caagcaggca	7620
396	ttcgagaaca	cgttcgcctc	gctgaacagg	catggcatca	ccggggataa	cctcggtctc	7680
398	ttgaacgcgg	tgtcgcctct	ggtctattat	atctacaaca	cgccggattt	cgatttccga	7740
400	ggatcgagcg	agttcgagcg	ggtcaatgcc	agctccatgc	acctctggtt	ggtgaacagc	7800
402	ctgctggtca	gcgccttcgt	tggccattcg	gatcagacca	tcaccaccgc	gcgcaatacg	7860
404	atccgcgatc	acctgcgtgt	aggccgcgat	ttcccagtac	gaaagctggt	cgatgccatg	7920
406	gcgaaggggg	gacggctatc	tcaggtggat	gagcgtacca	tcgaagaatt	gctggaaatg	7980

## RAW SEQUENCE LISTING

DATE: 04/20/2001

PATENT APPLICATION: US/09/826,206

TIME: 11:39:41

Input Set : A:\seqlist 1533 1100001.txt

Output Set: N:\CRF3\04202001\I826206.raw

```

408 caatatggca agccccggac ctctcgttgcg ctgtcgtcgc tctatcaggg catcgactgg 8040
410 aacggatcga cctggcatgt cgatcatatc attccccaag cggacgctca gaaaaatgtg 8100
412 ctgcgcgggc gcaatctgcc cgagcatcgc attcaggaaa tcttgggccc gggttaacagt 8160
414 ttgggcaacc tgcactttt gcgcggagat gagaatctcg agaaagggtg gctgccattc 8220
416 aggtcatgga ttaccggacg gcgcgttgat ttctacgagc agcatatgat cccggcgcac 8280
418 cttgaactgt gcgatgtact gcatctgccc gagttcgtgc gcgaacggga aaagggtgatc 8340
420 cggcgccggt tgatggagtt ggtcggagca cgacgcgcgt gaatgaggtc gtcttgtcac 8400
422 gcgaagagct gcgtcaatct tgtctcgacc tgcttgaaaa acgcgctgtc gaacaccctg 8460
424 cgggacacca aggcaagctc gccgcccgtc atgttgtgca ccgcgacga 8509
427 <210> SEQ ID NO: 3
429 <211> LENGTH: 5859
431 <212> TYPE: DNA
433 <213> ORGANISM: Artificial Sequence
437 <220> FEATURE:
439 <221> NAME/KEY: misc_feature
441 <223> OTHER INFORMATION: pADM291-4DS
445 <400> SEQUENCE: 3
446 tcgcgcgttt cgggtgatgac ggtgaaaacc tctgacacat gcagctcccg gagacgggtca 60
448 cagcttgtct gtaagcggat gccgggagca gacaagcccg tcagggcgcg tcagcgggtg 120
450 ttggcgggtg tcggggctgg cttaactatg cggcatcaga gcagattgta ctgagagtgc 180
452 accatatgcy gtgtgaaata ccgcacagat gcgtaaggag aaaataccgc atcaggcgcc 240
454 attcgccatt caggctgcgc aactgttggg aagggcgatc ggtgcgggcc tcttcgctat 300
456 tacgccagct ggcgaaaagg ggtgtgctg caaggcgatt aagttgggtg acgccagggt 360
458 tttcccagtc acgacgttgt aaaacgacgg ccagtgaatt cggcaatggg tcgaaattca 420
460 tagaattttg tgtgagggtc gtacgggctc tgacaggggt gctgcgcgga gatctctggt 480
462 ctgaggtagg gcgacaatgg agaggtgtta gttgccccct gtatcgtctc ctgctgtggc 540
464 cattgggtca tctgcccggg acatatgata ttccgctaga ggattactga tagtttctgc 600
466 ctgtcgggct tgtcgggctt gtcgggcttg tcgggcttgt cgggcctgtc cctcttgtcc 660
468 cgcctgtcct cactttttca caatcaaaaa atgggcgaag cccttcttgt tctatagttc 720
470 ttatagtcca tacgaaaatt acacataatt atcaatagct tattcgctta aaagggagta 780
472 attgggccgc aaaagggagt aattgggccg caaaagggag taattgggcc gcaaaaggga 840
474 gtaattgggc cgatcaggtg tgtttacatg gggaggaatc cccttaatca tttctcccca 900
476 tgggaaagac aacacaagtg gccgcagacc gggccttcga ccagacaaaa actgtgctcc 960
478 ctgccgaggt ggcgagaggg gtctatatgc gcaatccgcc ccgcctgcag gcgctcaagc 1020
480 tcatgcattt aatgatagcc actgcgggcy gccgcattgc tgatgatgtg cgccatgaaa 1080
482 tgcggctggc cgacattcgc gcaatcgacg gcatgaaaaa ccatgaccgt gagagcctga 1140
484 ccccgctggt cgaggagcta gccgctgcgg tgttgacca tgatgacct gcaaagatga 1200
486 tcgtgacagt cggcggtctg gtgatgagg cgcgaataga ctaccgccag gaggcaagcg 1260
488 gcgaactcct agtgacgtgg accttcggga gtacattccg tcgtatggcg gcggagtcca 1320
490 accactgggc cattctcgac cgtcaaacgg tattccatct cggtagtaag tattccgtgc 1380
492 tgcgtgtcca gcacgtctct agtctcgcca atcttgatcg gatgagcgcg aaaaccttta 1440
494 cggcccccca gttgcgggcy ctccttgagg tgcccagggy aaagatggtt cgttggaacg 1500
496 acgttaacag atttgccttc aaacctgcac tggatgagat caaccattta tcgctctga 1560
498 cattgacggc aaagccgacc aagattggcc gtacgtggc aagtgtgact ataggctggg 1620
500 aagtgaagaa cgaccaacc gtcgccaggy gcgagctggc ggttccaag gtcggtcgag 1680
502 atgctcgtcg cagaggggca gcggaacga tagccccctc cttcccagaa gcgggcggga 1740
504 tcacctacag tccacgttgg ctggagctga aacgctctgc tggcagcaac aaggacaacg 1800
506 atctgatcgc ctcagacttc cggcgcttct gtcgggagag aggcgtgcgt ctggacgctg 1860
508 caaacatcga aaaactgttt ttagatttct gcgcaaaggt agggaaggtt tgagttttga 1920

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/826,206

DATE: 04/20/2001

TIME: 11:39:42

Input Set : A:\seqlist 1533 1100001.txt

Output Set: N:\CRF3\04202001\I826206.raw

L:17 M:270 C: Current Application Number differs, Replaced Current Application No  
L:17 M:271 C: Current Filing Date differs, Replaced Current Filing Date